A Historical Atlas of Kham

A Cartographic Companion to the Tibetan Monastic Ritual Economy Model Database

Kham Edition, Version 1 – Published 2026

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Introduction

Beyond serving as a cartographic reference work, this atlas presents a regional systems model of historical Kham derived from the spatial distribution, institutional hierarchy, and estimated monastic populations of 1,370 monasteries and related religious institutions reconstructed for the period prior to 1950. The model identifies major monastic cities, subordinate towns, peripheral territories, and long-distance corridor networks that together structured much of the social, economic, and ritual life of eastern Tibet. In this sense, the atlas is intended not merely as a collection of maps, but as a reconstruction of the broader spatial organization of Kham as an integrated macroregional system.

Kham, one of the four major historical regions of Tibet alongside Amdo in the northeast, U-Tsang in Central Tibet, and Ngari in the west, formed a vast and internally diverse highland zone extending across the upper Salween, Mekong, and Yangtze river systems and into the mountain corridors of present-day Sichuan and Yunnan. Prior to the political and institutional transformations of the mid-twentieth century, this region contained a dense landscape of Buddhist monasteries, hermitages, pilgrimage sites, trade centers, and agricultural and pastoral communities linked through networks of ritual, economic exchange, and regional mobility. Monastic institutions functioned not only as religious centers, but as the principal urban and organizational nodes of a broader cultural and socioeconomic system. The cover map (Atlas Plate 1) also identifies the major traditional rong (river valleys, such as Nyarong) and gang (upland grassland regions) of Kham, geographic distinctions that recur throughout the regional systems and structural types reconstructed in the maps that follow.

This atlas presents a cartographic reconstruction of Kham's historical agropastoral landscape based on 1,562 monasteries and related religious institutions distributed across the region prior to 1950 (Figure 1). The maps included here are derived from the Tibetan Monastic Ritual Economy Model Database, Version 1: Kham, an open-access spatial archive integrating monastery locations, sectarian affiliations, estimated historical monastic populations, regional system classifications, trade and pilgrimage corridors, and associated geographic data (see Data Availability below). Together, the atlas and database provide a framework for visualizing and analyzing the regional systems through which much of historical Kham was organized.

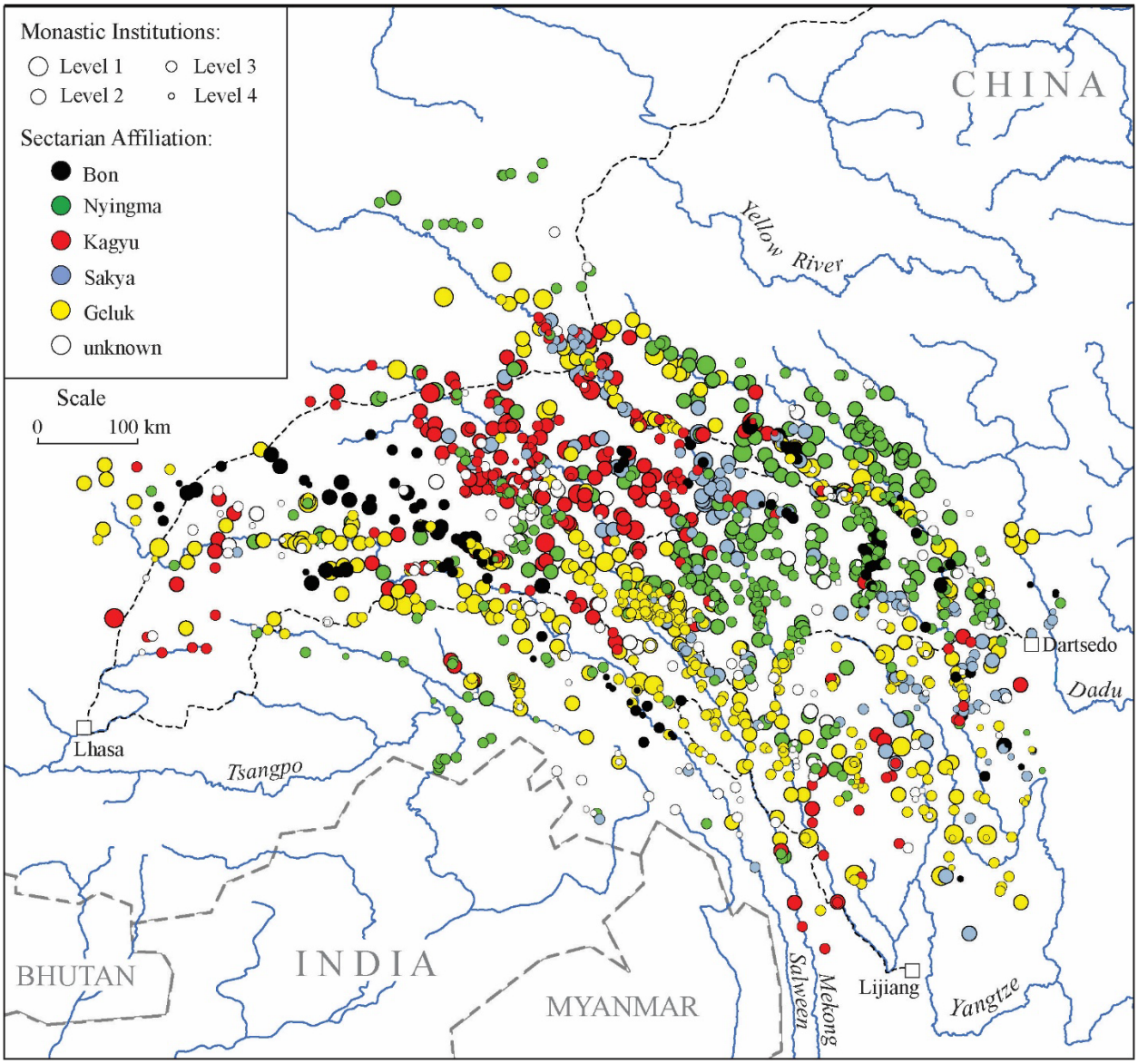


Figure 1. Monasteries of Kham (Atlas Plate 2). This map displays the reconstructed spatial distribution of 1,562 monasteries, temples, hermitages, shrines, and related religious institutions across Kham prior to the large-scale political and institutional transformations of the mid-twentieth century. Symbols are differentiated by estimated institutional size and sectarian affiliation, illustrating the hierarchical and regionally diverse structure of Kham's historical religious landscape. Major long-distance trade and pilgrimage routes, including the Northern Route and related routes linking Central Tibet, Sichuan, and Yunnan throughout Kham, are also shown, although the density of monastic institutions at this scale obscures many of the route alignments more clearly visible in later regional systems maps.

Together, the atlas and database aim to provide a foundational spatial framework for the historical study of Kham's cultural and economic geography while also reconstructing, in spatial form, elements of a regional world that was profoundly transformed following the incorporation of Tibet into the People's Republic of China after 1950. In this sense, the regional systems model presented here serves not simply as a cartographic exercise, but as an attempt to recover and make visible the spatial organization of a Tibetan civilization whose institutional and cultural landscapes were subsequently fragmented, dismantled, or fundamentally reconfigured during the twentieth century.

This project builds upon earlier cartographic work undertaken for *A Historical Atlas of Tibet* (2015), where the complexity and density of Kham's monastic landscape could not yet be reconstructed in sufficient detail within the scope of that larger atlas project. The present work therefore represents a more focused effort to systematically document and spatially reconstruct the historical institutional geography of eastern Tibet at a much finer regional scale. Individual monastery locations were systematically identified and georeferenced through high-resolution satellite imagery and cross-checked against textual, cartographic, and historical sources whenever possible.

Beyond the reconstruction of monastery point locations alone, the project also models broader regional patterns of interaction through terrain-adjusted proximal polygons designed to approximate pre-mechanized travel and communication fields, together with regional systems analysis. When visualized collectively, these monastery distributions reveal that Kham was not merely a scattered religious landscape composed of isolated temples and local ritual sites, but a macroregional system structured around major monastic centers, corridor networks, agricultural basins, and pastoral aggregation zones. The resulting maps make it possible to reconstruct not only the spatial distribution of religious institutions, but also the larger metropolitan, town, corridor, and peripheral structures through which much of historical Kham was organized.

Within this system, monasteries functioned as the principal institutional centers through which education, ritual activity, pilgrimage, manuscript and artistic production, taxation, exchange, and long-distance mobility were coordinated across wide territories. Monastic centers therefore operated not simply as religious establishments, but as enduring nodes of regional aggregation linking dispersed pastoral and agricultural populations through recurring cycles of ritual activity, economic exchange, and institutional affiliation.

The atlas therefore approaches Kham not through modern administrative divisions, but through historically reconstructed institutional landscapes. The regional boundaries represented here are analytical rather than political. They reflect functional, not formal regions and approximate the spatial extents of historically attested monastic networks and their associated spheres of interaction rather than the fixed boundaries of contemporary prefectures or counties. In some frontier zones, such as portions of the Dadu river corridor, Tibetan ritual influence extended beyond the principal monastic systems represented in this atlas, while elsewhere large concentrations of monasteries formed durable metropolitan and sub-regional structures spanning extensive basins and pastoral plateaus.

The maps included in this volume are intentionally selective and schematic. For reasons of cartographic clarity, overview plates generally identify only the largest monasteries and major regional centers. The atlas is therefore designed not as an exhaustive site inventory, but as a visual guide to the broader spatial organization of monastic institutions across Kham. Full-resolution map plates, spreadsheets, KML files, and supporting documentation are available separately through the accompanying Dataverse repository, together with the underlying shapefiles and GIS data comprising the broader Tibetan Monastic Ritual Economy Model Database. These materials are intended to support further cartographic, historical, and spatial analysis.

The atlas also reflects the methodological challenges involved in reconstructing the historical geography of eastern Tibet. Much of the institutional landscape represented here was damaged, transformed, or destroyed during the political upheavals of the mid-twentieth century, and many monasteries survive today only in partially reconstructed form. In numerous cases, historical gazetteers preserve monastery names but not precise coordinates, while modern satellite imagery reveals the remains of sites absent from written records. The

resulting reconstruction therefore represents a synthesis of fragmentary historical evidence assembled through geospatial analysis rather than a complete or final inventory.

At the same time, the historical geography of Kham displays a striking degree of macroregional organization. Long-term patterns of social interaction, mobility, and regional integration, reflected in part through the distribution of Tibetic language and dialect regions identified by Tournadre and Suzuki (2023), correspond closely to the major river systems, agricultural basins, and trade corridors of eastern Tibet. These broader linguistic and cultural interaction zones also helped guide the reconstruction of Kham's regional systems within this study, particularly along major corridor regions such as the Northern Route. In contrast, the pastoral regions of the northern and western uplands display different but equally coherent forms of regional integration shaped through grassland mobility, monastic affiliation, and seasonal aggregation (Figure 2).

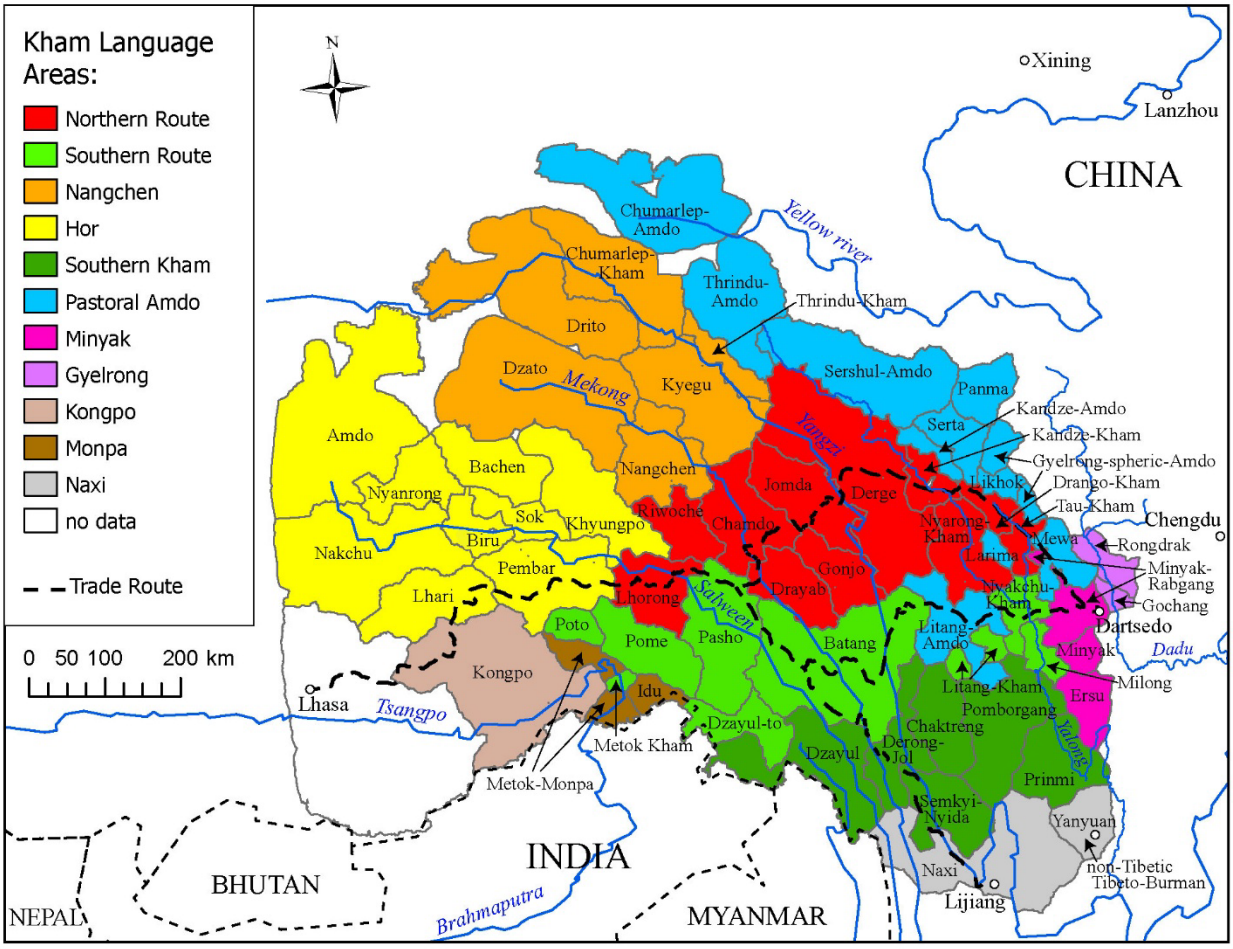


Figure 2. Major Tibetic Language and Dialect Regions of Kham (Atlas Plate 3). Major Tibetic language and dialect regions of Kham, adapted primarily from the geolinguistic classifications of Tournadre and Suzuki (2023). The map identifies much of Kham as belonging to the broader Southeastern Tibetic linguistic section, including the Northern Route and Southern Route corridor regions discussed throughout this atlas, while also identifying embedded Amdo-speaking areas associated particularly with the pastoral uplands of eastern Kham and adjacent Amdo. The Kongpo language area is also included for comparative and geographic reference in order to clarify the western linguistic context of Kham and its frontier zones, although Kongpo has often been classified as part of Central Tibet rather than Kham proper. Major neighboring Tibeto-Burman and other non-Tibetic language regions, many of which were historically integrated into the broader economic and ritual systems of Kham, are also shown together with the principal long-distance trade routes linking Kham with Central Tibet, Sichuan, and Yunnan.

Contemporary administrative divisions are also shown for geographic reference (Figure 3). Although the regional systems reconstructed in this atlas are historical and analytical rather than administrative in nature, the modern prefectural and county divisions of the People's Republic of China provide an important spatial framework through which readers may orient the historical geography of Kham within present-day political boundaries. Much of historical Kham today falls within the eastern portion of the Tibet Autonomous Region and Tibetan areas of western Sichuan, northwestern Yunnan, and southern Qinghai, regions whose modern administrative organization often intersects only partially with the historical cultural and institutional landscapes reconstructed in this study.

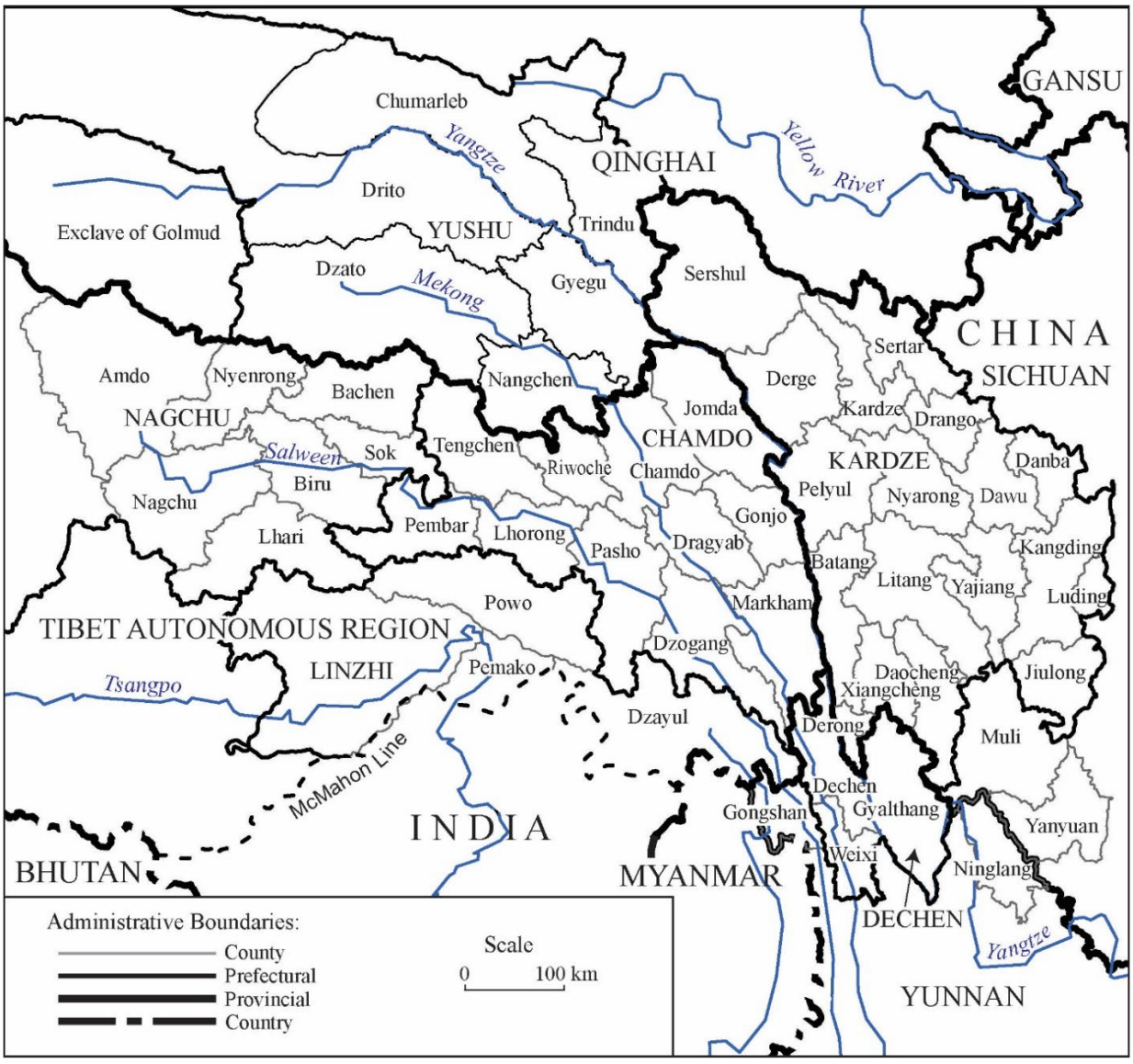


Figure 3. Contemporary Administrative Divisions (Atlas Plate 4). Contemporary provincial, prefectural, and county-level administrative divisions of the People's Republic of China across the historical region of Kham. The map is included primarily for geographic reference in order to assist readers in relating the historical regional systems reconstructed in this atlas to present-day political and administrative boundaries. Due to cartographic space limitations, administrative units are labeled using either the Tibetan or Chinese form most commonly employed in modern scholarship and regional usage, rather than listing multiple historical and contemporary variants.

The Kham Regional Systems Model

The regional systems model presented in this atlas represents an attempt to reconstruct the large-scale spatial organization of historical Kham through the distribution and hierarchy of monastic institutions, their associated interaction fields, and the major ecological and corridor structures of eastern Tibet. The systems identified here are analytical rather than administrative units and are intended to represent historically recurring patterns of institutional aggregation and regional interaction (Figures 4-8).

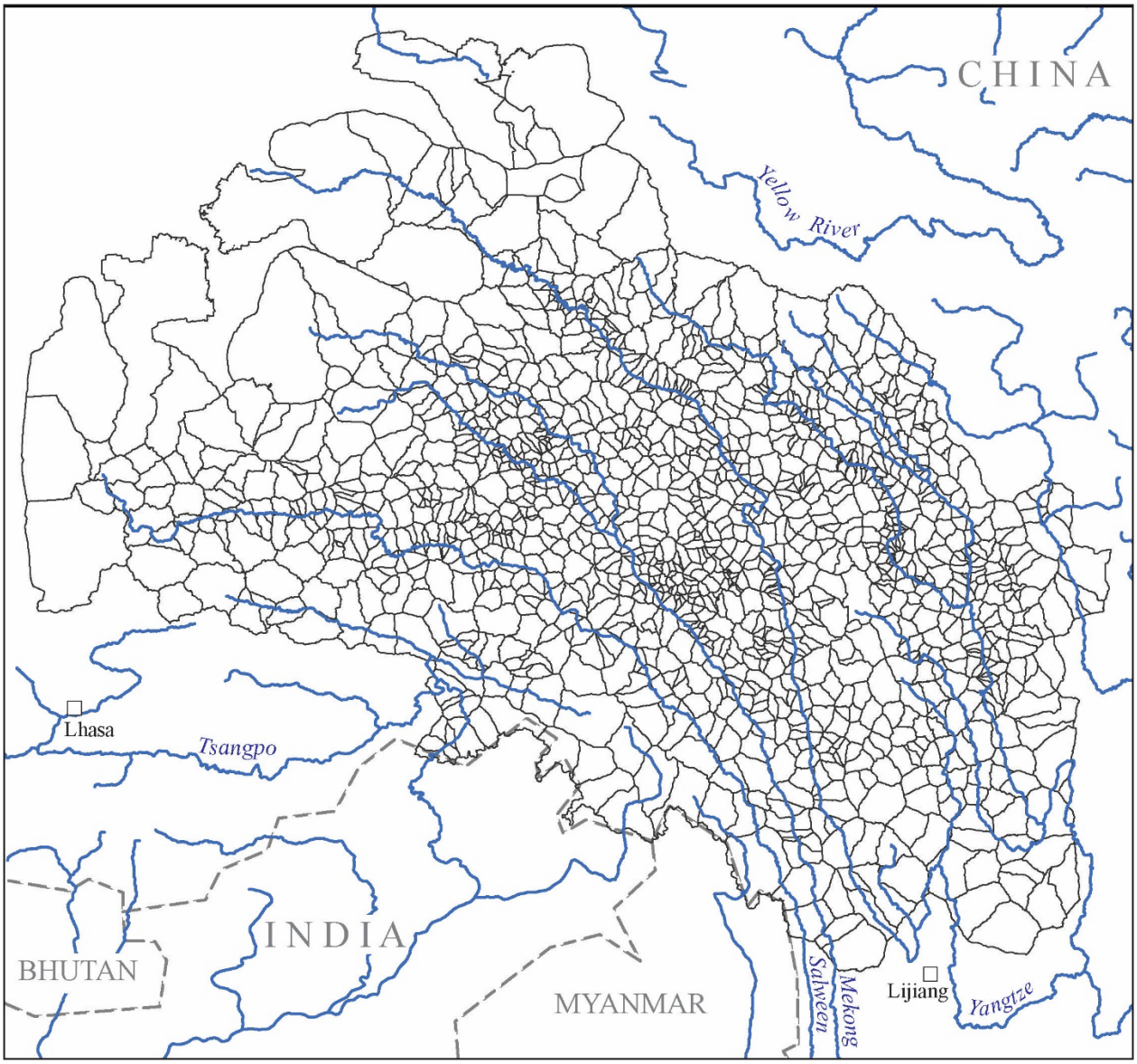


Figure 4. Least-Cost Terrain-Adjusted Monastic Interaction Fields of Kham (Atlas Plate 5). Terrain-adjusted proximal polygons modeled from reconstructed monastery locations across Kham using relative travel-cost assumptions derived from topography, hydrology, and differential terrain accessibility. The resulting interaction fields approximate localized patterns of routine spatial interaction associated with individual monasteries prior to the mid-twentieth century. These polygons do not represent fixed political or exclusive ritual boundaries, as pilgrimage, trade, seasonal movement, and participation in major festivals and assemblies frequently extended across multiple regions and highland corridors.

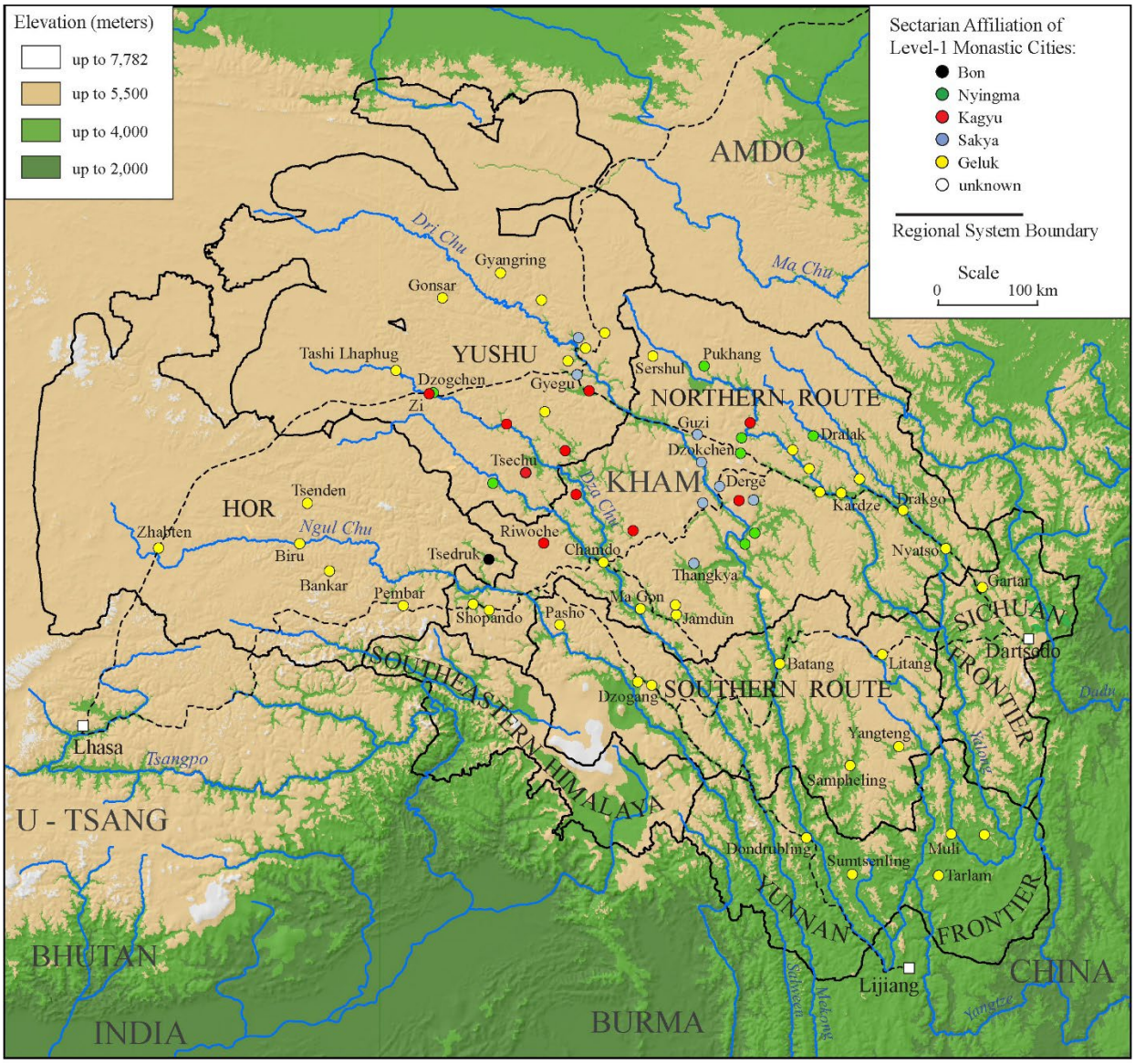


Figure 5. Regional Systems of Kham, ca. 1800-1950 (Atlas Plate 6). The seven major regional systems of Kham reconstructed from monastery distributions, terrain-adjusted proximal polygons, and associated regional aggregation patterns. Major long-distance trade and travel routes are also shown. Level-1 monasteries, representing institutions with estimated historical monastic populations of 500 or more monks or nuns ca. 1950, are colored by sectarian affiliation. Only the principal apex monasteries of each regional system are named.

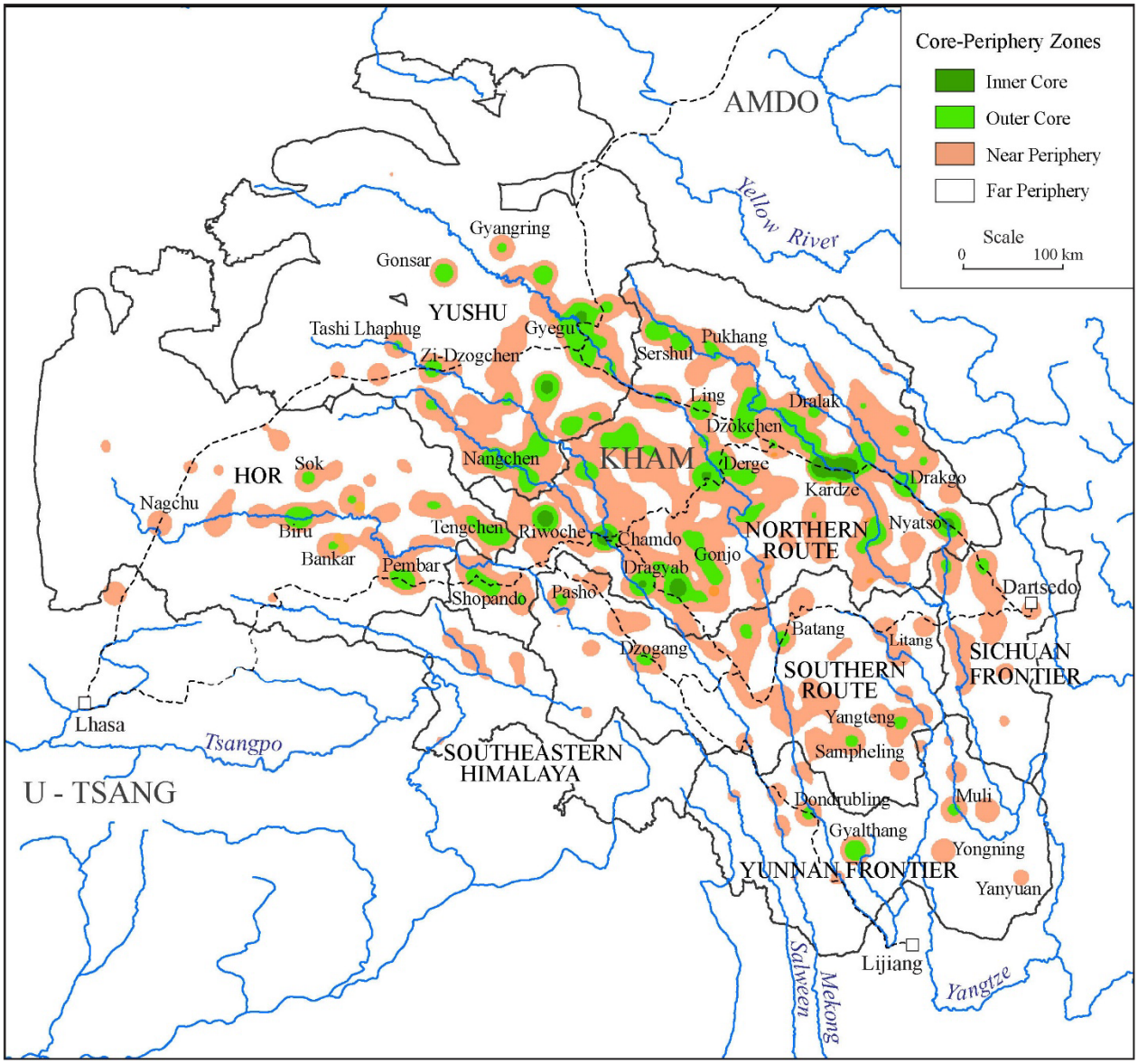


Figure 6. Core-Periphery Structure of Kham (Atlas Plate 7). Reconstructed monastic population kernel density surface of Kham based on estimated monastic populations ca. 1950. The four zones represent successive core-periphery levels within the broader Kham monastic system, ranging from the principal metropolitan cores to the surrounding peripheral regions. The regional system boundaries of Kham are also shown for reference, though only the core areas of the principal city-level systems are labeled. Major long-distance trade and pilgrimage routes are additionally depicted to illustrate the broader corridor structure linking the principal monastic centers of eastern Tibet.

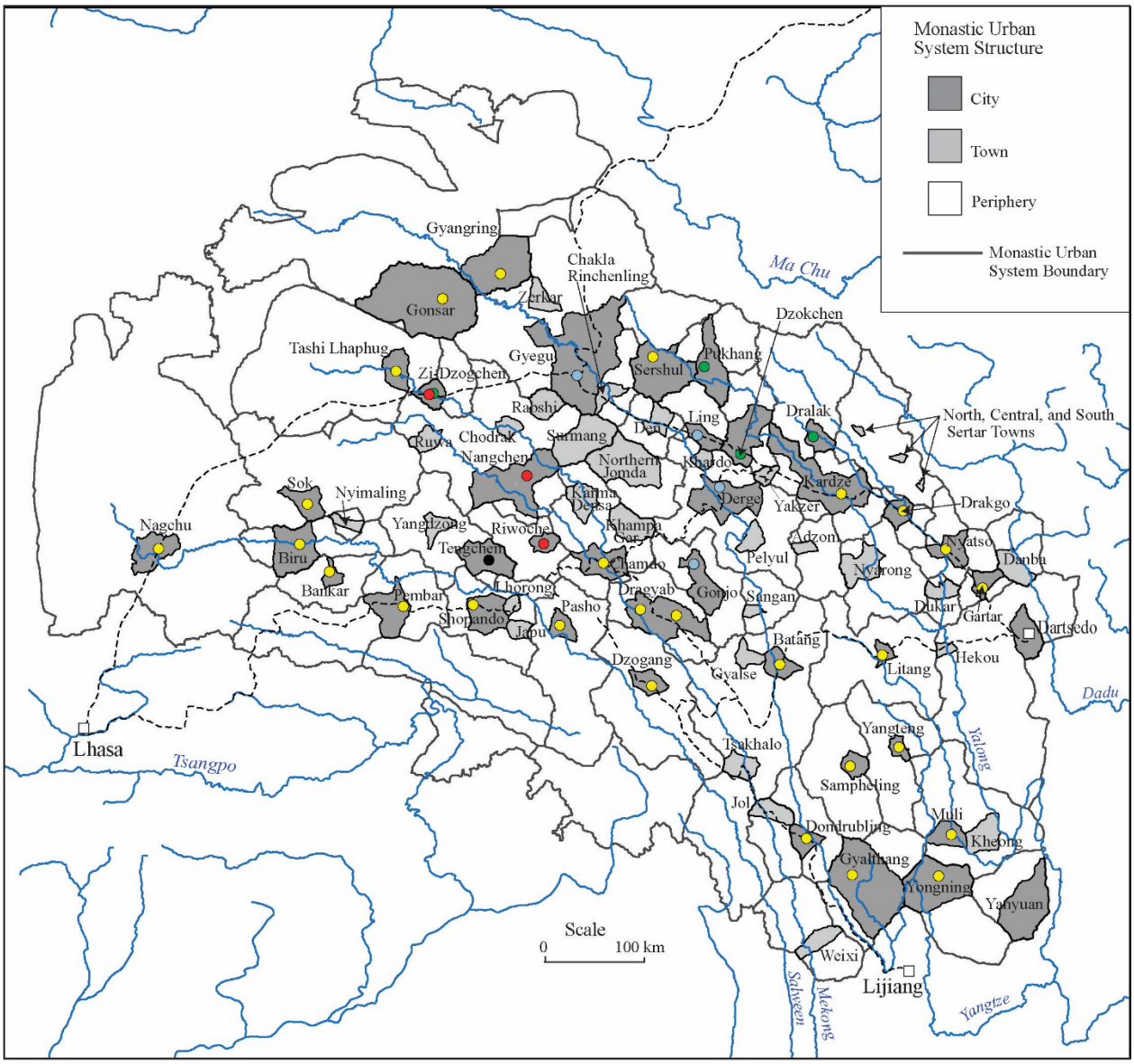


Figure 7. Monastic Sub-Systems of Kham (Atlas Plate 8). The reconstructed monastic urban structure of Kham based on terrain-adjusted regional system polygons derived from monastery distributions and estimated monastic populations ca. 1950. Dark gray areas indicate metropolitan city-level cores, lighter gray areas indicate subordinate and independent town systems, and white areas indicate surrounding peripheral regions. Boundary lines delineate the major monastic urban systems of Kham. Major trade and pilgrimage routes are shown for reference. The principal apex monasteries of each regional system are also shown; but note town-level areas lack such larger metropolitan centers. Refer to previous atlas plates for sectarian color key and for monastery names where these differ from the corresponding sub-system names.

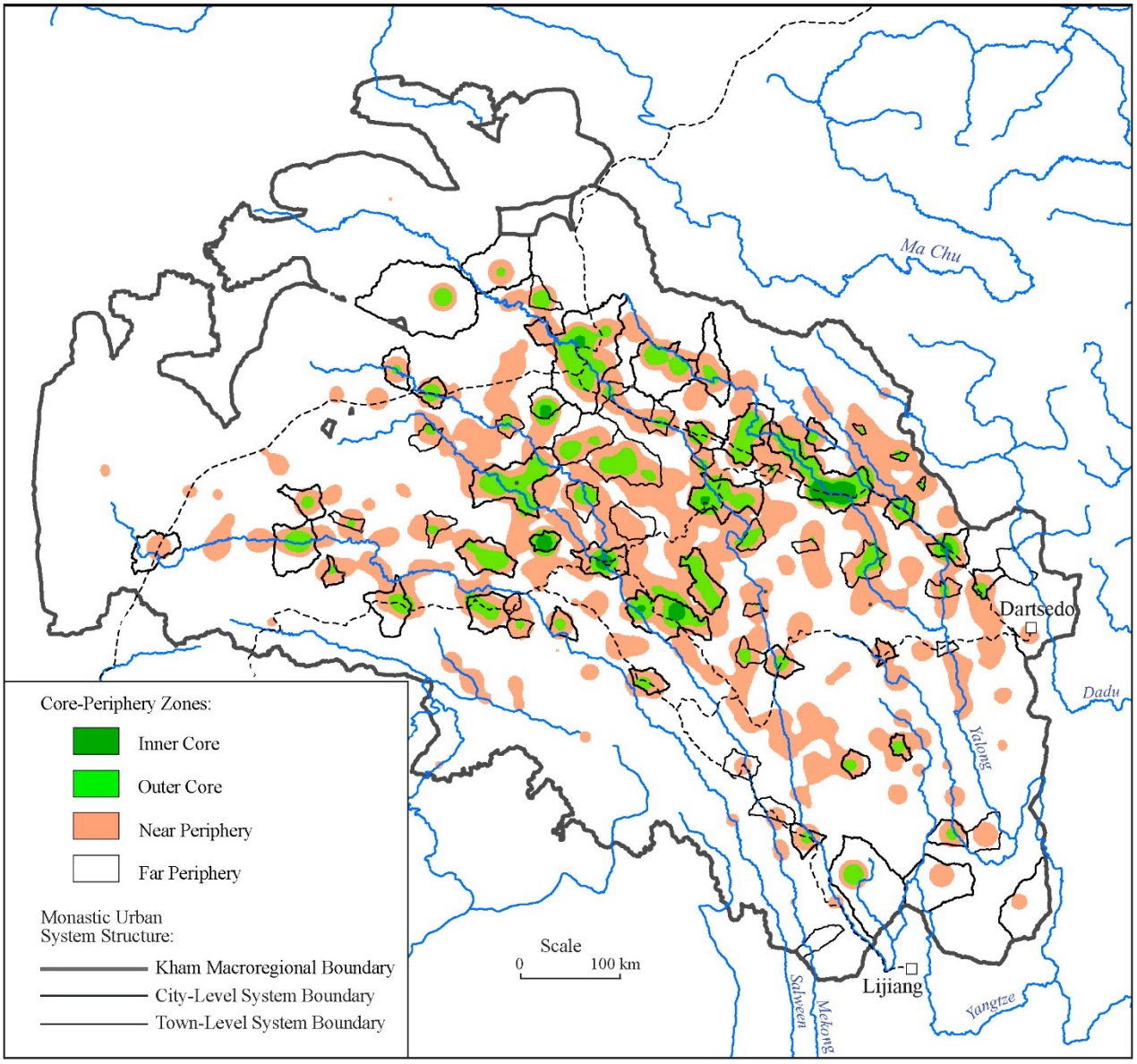


Figure 8. Monastic Sub-Systems and Core-Periphery Structure of Kham (Atlas Plate 9). Terrain-adjusted city and town system polygons of Kham overlaid upon the reconstructed monastic population density surface based on estimated monastic populations ca. 1950. The underlying kernel density surface illustrates the broader concentration of monastic populations across eastern Tibet, while the polygon boundaries depict the spatial organization and extent of individual city- and town-level monastic urban sub-systems. Major trade and pilgrimage routes are shown for reference. Refer to Plate 8 for the names of each sub-system.

Structural Types and Transportation Corridors

The completion of regional system coding for each monastery made it possible to view the sub-regions of Kham not as isolated local landscapes, but as components of a larger macroregional structure. When examined together, the resulting patterns revealed a series of recurring structural forms shaped by the interaction of physical geography, local lifeways, and long-term networks of trade, pilgrimage, and political exchange. Figure 9 presents a typology of these regional forms, distinguishing Basin Cities, Grassland Cities, Corridor Cities, Valley Towns, Grassland Towns, and related peripheral settlement types. These categories emerged inductively from the data themselves and reflect the different ways in which monastic institutions became embedded within the landscapes and transportation networks of eastern Tibet.

The resulting pattern suggests that the regional systems of Kham did not conform to a single urban model. Rather, they developed through multiple structural pathways that linked local communities to broader networks of interaction. Over time, interactions among the societies of Kham and neighboring Chinese, Central Tibetan, and Tibetan-Burman populations gave rise to a network of monastic urban systems extending along the principal corridors connecting Sichuan, Yunnan, Central Tibet, and Amdo. Together, these regional forms reveal the organizational diversity through which the broader Kham macroregion was historically integrated.

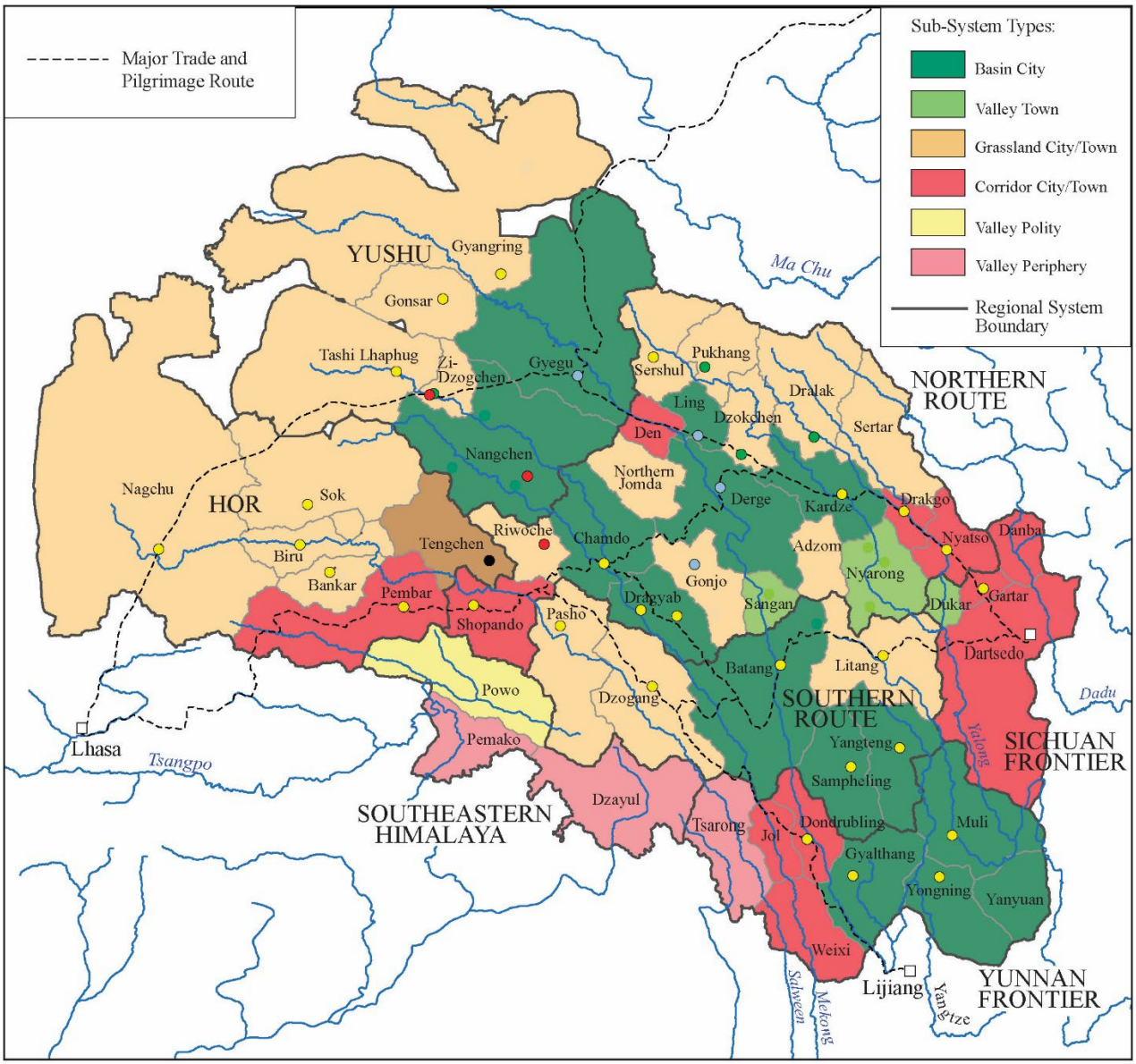


Figure 9. Structural Types of Kham's Monastic Sub-Systems (Atlas Plate 10). The principal structural types of Kham's monastic sub-systems. Circle symbols indicate the apex monastery or monasteries associated with each city-level sub-system and retain the sectarian color scheme used in previous plates. Basin cities and towns were concentrated primarily within the agricultural river valleys (*rong*) of eastern Tibet, whereas grassland systems occupied the pastoral uplands (*gang*). Corridor systems developed along major trade and travel routes linked to Central Tibet, Sichuan, and Yunnan. Together, these structural types illustrate the diversity of regional organizational forms that composed the broader Kham macroregional system.

Figure 10 situates the structural types identified in Figure 9 within the broader network of trade routes, river crossings, ferries, bridges, and mountain passes that connected the major regions of Kham. Particularly notable is the ancient Lhasa–Kokonor Route, which linked Central Tibet and Amdo across the higher western uplands, where broad braided rivers and shallower channels often permitted seasonal fording. By contrast, the later development of major east–west corridors across Kham increasingly connected Central Tibet with Sichuan and Yunnan through a network of monastic centers, caravan routes, and established crossing points.

The map also highlights the importance of transportation infrastructure in shaping regional interaction. Because many of the major rivers of Kham were deeply incised and difficult to bridge, only a limited number of permanent crossings existed. Important examples included the bridge over the Mekong at Chamdo, the Salween crossing on the Gya Lam, and the Luding Iron Chain Bridge over the Dadu River near Dartsedo. Constructed by the Qing in 1706, the Luding Bridge became one of the most significant transportation improvements on the Sichuan–Tibet corridor, facilitating communication, trade, and administrative integration between eastern Tibet and China.

At a more localized scale, transportation networks also supported regional systems that are less visible in accounts of long-distance caravan trade. For example, at least three historical iron chain bridges crossed the Ngom Chu within the Nangchen kingdom, linking communities, monasteries, and pilgrimage routes in the upper Mekong basin. These crossings illustrate the importance of local and regional mobility in sustaining the internal cohesion of the Nangchen regional system alongside the major long-distance routes emphasized elsewhere in this atlas.

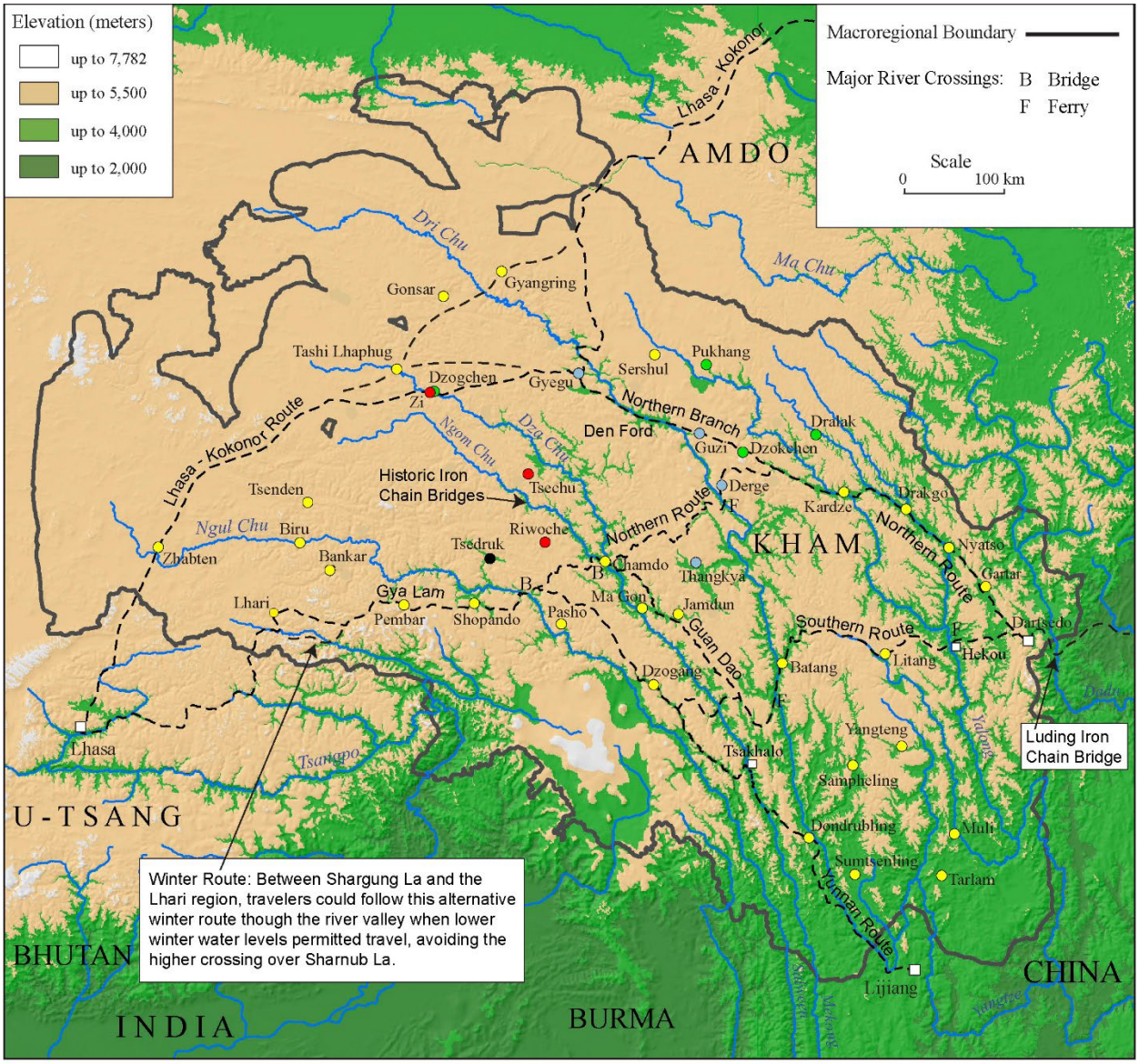


Figure 10. Long-Distance Trade and Travel Routes of Kham (Atlas Plate 11). Major long-distance routes reconstructed from historical maps, travel narratives, and satellite imagery. Shown are the principal corridors linking Kham with neighboring regions, including the Lhasa–Kokonor Route connecting Central Tibet and Amdo, the Gya Lam and Guan Dao linking Kham with Sichuan, the Yunnan Route connecting the southern frontier with Lijiang and northwestern Yunnan, and the Northern Route, Northern Branch, and Southern Route that structured movement within Kham itself. Also shown are key ferries, bridges, fords, and seasonal route variants that facilitated travel across the major river systems of eastern Tibet. Together, these corridors formed the transportation framework through which trade, pilgrimage, political communication, and regional interaction were integrated across the Kham macroregion.

Table 1. Regional Systems of Kham

ID	Sub-System	Structural Type	Apex Institution(s)	Subordinate Town Systems
Yushu System				
1001	Nangchen	Basin City	Tsechu	Chodrak, Surmang, Rabshi, Ruwa
1002	Gyegu	Basin City	Gyegu	Zerkar, Chakla Rinchenling
1003	Gyangring	Grassland City	Gyangring	none
1004	Gonsar	Grassland City	Gonsar	none
1005	Tashi Lhaphug	Grassland City	Tashi Lhaphug	none
1006	Zi-Dzogchen	Grassland City	Zi Gon, Dzogchen	none
Northern Route System				
2001	Shopando	Corridor City	Shopando	Lhorong, Japu
2002	Riwoche	Grassland City	Riwoche	none
2003	Chamdo	Basin City	Chamdo	Karma Densa, Khampa Gar
2004	Northern Jomda	Grassland Town	none	none
2005	Derge	Basin City	Derge Gonchen	Pelyul, Khardo
2006	Ling	Basin City	Gonzig	none
2007	Dragyab	Basin City	Ma Gon, Jamdun	none
2008	Gonjo	Grassland City	Tangkya	none
2009	Sangan	Valley Town	none	none
2010	Sershul	Grassland City	Sershul	none
2011	Pukhang	Grassland City	Pukhang	none
2012	Dzokchen	Grassland City	Dzokchen	none
2013	Kardze	Basin City	Kardze	Yakzer
2014	Dralak	Grassland City	Dralak	none
2015	North Sertar	Grassland Town	none	none
2016	Central Sertar	Grassland Town	none	none
2017	South Sertar	Grassland Town	none	none
2018	Drakgo	Corridor City	Drakgo	none
2019	Nyatso	Corridor City	Nyatso	none
2020	Adzom	Grassland Town	none	none
2021	Nyarong	Valley Town	none	none
2022	Den	Corridor Town	none	none
Southern Route System				
3001	Litang	Grassland City	Litang	none
3002	Batang	Basin City	Batang	Tsakhalo, Gyalse
3003	Dzogang	Grassland City	Dzogang	none
3004	Pasho	Grassland City	Pasho	none
3005	Sampheling	Basin City	Sampheling	none
3006	Yangteng	Basin City	Yangteng	none
Hor System				
4001	Pembar	Corridor City	Pembar	none
4002	Tengchen	Corridor-Basin City	Tsedruk	Yangdzong
4003	Bankar	Grassland City	Bankar	none
4004	Biru	Grassland City	Biru	none
4005	Sok	Grassland City	Tsenden	none
4006	Nagchu	Grassland City	Zhabten	none
4007	Nyimaling	Grassland Town	none	none

ID	Sub-System	Structural Type	Apex Institution(s)	Subordinate Town Systems
Southeastern Himalayan Region				
5001	Powo	Valley Polity	none	none
5002	Pemako	Corridor Periphery	none	none
5003	Dzayul	Corridor Periphery	Sangngak Chodzong	none
Southern Kham-Yunnan Frontier System				
6001	Gyalthang	Basin City	Sumtsenling	none
6002	Dondrubling	Corridor City	Dondrubling	none
6003	Jol	Corridor Town	Dechenling	none
6004	Tsarong	Corridor Periphery	Menkhung	none
6005	Weixi	Corridor Town	Weixi	none
6006	Muli	Basin City	Muli Gonchen	Kheong
6007	Yongning	Basin City	Tarlam	none
6008	Yanyuan	Basin City	Tashi Choling	none
Dartsedo-Sichuan Frontier System				
7001	Dartsedo	Corridor City	Dartsedo	Hekou
7002	Danba	Corridor Town	Danba	none
7003	Gartar	Corridor City	Gartar	none
7004	Dukar	Valley Town	none	none

Regional System Descriptions

Yushu System

Occupying the northwestern plateau zone of Kham at the headwaters of the Yangtze and Mekong, the Yushu system formed one of the most internally coherent monastic ritual landscapes of the Kham macroregion. Historically associated with the Nangchen kingdom and neighboring pastoral polities, the region combined broad upland grasslands, high-altitude pastoral corridors, and a smaller number of agricultural valley basins linked through dense networks of monastic affiliation, pilgrimage, and seasonal ritual aggregation. The region was characterized by an unusually high concentration of Kagyü institutions, together with important Nyingma, Sakya, and Geluk centers distributed across both major basin centers and remote pastoral zones. Major monastic centers such as Gyegu, Tsechu, Chodrak, and Surmang functioned not only as religious institutions, but as principal nodes of political authority, redistribution, education, and regional coordination within a wider agropastoral economy.

In contrast to the more corridor-oriented systems of central and southern Kham, Yushu displayed a strongly basin-centered structure organized around major ritual centers and their surrounding pastoral hinterlands. Seasonal assemblies, pilgrimage festivals, and ritual donation cycles periodically concentrated dispersed populations within metropolitan monastic centers, producing recurring patterns of aggregation and redistribution across the region. Although long-distance caravan routes connected Yushu with Amdo, Central Tibet, Chamdo, and the Northern Route systems farther east, the region retained a high degree of internal cohesion rooted in monastic affiliation, pastoral mobility, and localized ritual economies. The resulting landscape combined large monastic basins, grassland ritual centers, and extensive pastoral peripheries into one of the most structurally integrated regional systems of historical Kham.

Northern Route System

Extending across the agricultural basins, upland grasslands, and river corridors of central Kham, the Northern Route system formed one of the principal east–west corridors of the Kham macroregion and the major internal corridor linking the metropolitan systems of central Kham. Historically associated with the broader southeastern Tibetic linguistic continuum, the dialects of the Northern Route itself retained relatively high levels of mutual intelligibility, reflecting long-standing patterns of caravan trade, pilgrimage, monastic affiliation, and pastoral mobility that linked the basin cities, grassland centers, and corridor towns of central Kham into a highly integrated regional system. Major basin centers such as Derge, Kardze, Chamdo, and Dragyab supported large monastic populations and complex metropolitan hierarchies, while surrounding grassland cities including Riwoche, Dzokchen, Sershul, and Gonjo organized extensive pastoral hinterlands through networks of monasteries, pilgrimage sites, and ritual territories. The system also contained numerous corridor and valley towns situated at strategic river crossings, trade junctions, and frontier corridors linking the uplands of Kham with Sichuan, Yushu, and Central Tibet.

The Northern Route system was characterized by exceptional sectarian diversity and historical layering. Early Bon, Sakya, Kagyu, and Nyingma foundations established many of the principal ritual landscapes of the region between the eleventh and fourteenth centuries, while later Geluk expansion from the fifteenth century onward produced some of the largest scholastic and metropolitan centers in eastern Tibet. In many regions these later Geluk institutional overlays coexisted with older lineage-based ritual geographies rather than fully replacing them, producing a highly differentiated landscape in which basin cities, grassland monastic centers, corridor

towns, and peripheral pastoral territories developed distinct but interconnected forms of regional organization. Structurally, the Northern Route formed a discontinuous but highly integrated corridor system whose monastic institutions organized movement, exchange, ritual aggregation, and political authority across much of central Kham.

Southern Route System

Extending across the high valleys, river crossings, and frontier basins south of the main Northern Route corridor, the Southern Route system formed one of the principal long-distance route systems linking Central Tibet with western Sichuan and Yunnan. The region included the major monastic centers of Litang, Batang, Dzogang, Pasho, Sampheling, and Yangteng, together with a network of caravan stations, river crossings, and smaller corridor settlements distributed along the upper Yalong, Yangtze, Mekong, and Salween river systems. Unlike the more internally articulated basin and grassland hierarchies of the Northern Route, the Southern Route was structured more directly through long-distance mobility, with regional organization concentrated along elongated corridor valleys and strategic transit zones connecting Central Tibet with the Sino-Tibetan frontier.

Historically, parts of the Southern Route also overlapped with the Qing imperial courier and military road system known as the Guan Dao, particularly along the Batang–Markham–Chamdo corridor, which linked eastern Tibet with Sichuan and the administrative centers of the Ganden Podrang and Qing frontier system. At the same time, older caravan and pilgrimage routes long predated this imperial overlay and continued to structure movement, trade, and monastic interaction throughout the region. The Southern Route system was characterized by a mixed sectarian landscape in which Geluk, Kagyu, Nyingma, and Sakya institutions coexisted within a corridor-oriented spatial structure shaped by trade, pilgrimage, state movement, and pastoral mobility. Large monastic centers such as Litang and Batang functioned not only as major ritual and scholastic institutions, but also as strategic aggregation points linking the plateau interior with the expanding commercial and political frontier zones of southwestern China.

Hor System

Occupying the high pastoral uplands west of the main basin systems of central Kham, the Hor system formed a broad grassland zone extending across the upper Salween, Nagchu, and Tengchen regions. Unlike the more densely nucleated basin systems farther east, the Hor region was characterized by dispersed pastoral mobility, long-distance caravan movement, and smaller, more spatially scattered zones of monastic urbanism. Regional organization instead centered on large monastic grassland cities such as Pembar, Bankar, Biru, Sok, and Nagchu, whose monasteries structured ritual aggregation, pilgrimage, and seasonal exchange across extensive pastoral territories. Although major trade and pilgrimage corridors crossed the region, including both the western continuation of the Gya Lam linking Central Tibet with central Kham and the great northern caravan routes connecting Nagchu with Yushu and Amdo, settlement remained comparatively discontinuous and strongly conditioned by high-altitude pastoral ecology.

The Hor system was also distinguished by the persistence of large Bonpo ritual landscapes alongside major Buddhist monastic systems. In regions such as Bankar, Tengchen and Bachen, Bon monasteries maintained dense ritual calendars structured around extended cycles of tantric, protective, and territorial rites that organized patterns of movement and participation across dispersed pastoral communities. At the same time, Buddhist monasteries increasingly dominated the principal corridor zones and major centers of long-distance interaction,

producing a layered religious landscape in which Bon institutions survived most strongly in secondary valleys, upland margins, and remote frontier zones extending toward the northern Dangla range. Historical accounts further suggest that political administration and market integration remained relatively weak across much of the region, while monastic ritual cycles provided the principal framework through which dispersed pastoral populations were periodically integrated into broader regional systems of exchange, obligation, and religious authority.

Southeastern Himalayan Region

Occupying the deeply dissected valleys and mountain corridors extending south of the principal river valleys and uplands of Kham, the Southeastern Himalayan Region formed one of the most geographically distinctive and least densely urbanized systems of the Kham macroregion. The region included the valley polity of Powo, the sacred landscape of Pemako, and the frontier corridor systems of Dzayul and adjacent Himalayan valleys linking southeastern Tibet with present-day Arunachal Pradesh, northern Burma, and the upper Brahmaputra basin. Unlike the large basin cities and grassland centers characteristic of northern and central Kham, which were linked by major caravan routes, settlement and institutional organization here were constrained by steep relief, dense forests, heavy precipitation, and the fragmented river valleys of the eastern Himalaya, where pack-animal transport was often impractical and long-distance movement frequently depended upon human porters. Monastic institutions were generally smaller and more dispersed, while political authority often remained centered upon local valley polities, fortress settlements, and small-scale territorial authorities.

At the same time, the region occupied a position of considerable religious and strategic importance. Pemako emerged as one of Tibet's most significant hidden lands (sbas yul), attracting pilgrims, treasure revealers, and religious migrants from across the Tibetan world. Dzayul and neighboring valleys functioned as important frontier corridors linking Kham with the eastern Himalaya and the borderlands of India and Burma, while local monasteries, fortress settlements, and administrative centers helped organize movement and authority within otherwise highly fragmented landscapes. Trade routes passing through these valleys also facilitated the exchange of rice, grain, forest products, and other lowland commodities for Tibetan salt, wool, and pastoral products, linking the region to wider networks of exchange extending across southeastern Tibet and the eastern Himalayan borderlands. Structurally, the Southeastern Himalayan Region lacked the dense metropolitan hierarchy visible elsewhere in Kham and instead consisted of a mosaic of valley polities, pilgrimage landscapes, and corridor peripheries connected through difficult mountain routes, sacred geography, and periodic long-distance movement. The resulting system represented the most distinctly Himalayan component of the broader Kham macroregional network.

Southern Kham-Yunnan Frontier System

Occupying the river valleys, mountain basins, and trade corridors extending south and southeast from central Kham toward Yunnan, the Southern Kham–Yunnan Frontier System formed one of the principal interfaces between the Tibetan Plateau and the ethnically diverse highlands of southwestern China. The region included the major centers of Gyalthang, Dondrubling, Muli, Yongning, and Yanyuan, together with a network of corridor towns and market settlements linking eastern Tibet with northwestern Yunnan and southwestern Sichuan. Unlike the large pastoral systems of northern Kham, the region was characterized by a mixture of agricultural basins, mountain valleys, and caravan routes that facilitated sustained interaction among Tibetan,

Naxi, Mosuo, Pumi, Yi, and Han communities. Monastic institutions were concentrated within fertile valleys and trade centers, where they operated alongside local rulers, native chieftains, and frontier administrations.

The region occupied an important position within the long-distance trade networks connecting Tibet with Yunnan and southwest China. Caravan routes carried tea, textiles, manufactured goods, and other lowland commodities into eastern Tibet, while Tibetan salt, wool, medicinal products, and livestock moved southward through the frontier markets of the region. Major monasteries such as Sumtsenling, Muli, and Tarlam served not only as religious institutions but also as important centers of regional integration embedded within wider systems of exchange, pilgrimage, and political authority. Structurally, the Southern Kham–Yunnan Frontier System consisted of a combination of basin cities, the corridor city of Dondrubling, the corridor towns of Jol and Weixi, and the remote Tsarong valley periphery, all connected through dense commercial networks and long-distance caravan routes. The resulting system represented the most economically integrated frontier zone between Kham and the highlands of southwestern China.

Dartsedo-Sichuan Frontier System

Occupying the eastern margin of Kham along the principal routes linking the Tibetan Plateau with the Sichuan Basin, the Dartsedo–Sichuan Frontier System formed the principal zone of exchange between eastern Tibet and China proper. The region included the major corridor centers of Dartsedo and Gartar together with a network of market settlements, river crossings, caravan stations, and monastic centers. Long before the expansion of Qing administration, the region was already integrated through commercial networks and religious institutions, including important Sakya establishments and their affiliated branch monasteries distributed across the eastern frontier. Unlike the basin and grassland systems characteristic of much of Kham, settlement and economic activity were concentrated along major transportation corridors where merchants, pilgrims, officials, and travelers converged. Monastic institutions operated alongside commercial markets, native chieftaincies, and later imperial administrations, producing a frontier landscape characterized by intense cultural and economic interaction.

At the same time, the region occupied a central position within the long-distance trade networks linking Tibet and China. Tea, textiles, metals, manufactured goods, and other lowland commodities entered Tibet through the markets of Dartsedo, while wool, hides, medicinal products, musk, and other Tibetan commodities flowed eastward into Sichuan. Dartsedo emerged as one of the most important commercial and administrative centers in eastern Tibet, serving as a major entrepôt, staging point, and political interface between Tibetan and Chinese authorities while also anchoring a wider network of frontier settlements extending through the eastern valleys of Kham. Structurally, the Dartsedo–Sichuan Frontier System consisted primarily of corridor cities and towns connected through dense transportation networks and sustained commercial exchange. The resulting system represented the principal commercial gateway between Kham and the Sichuan Basin and one of the most strategically significant frontier regions of eastern Tibet.

Sources and Methods

Study Area

This atlas examines the historical geography of Kham, one of the principal historical regions of Tibet. Rather than assuming a fixed territorial boundary, the study adopts a broad regional framework encompassing the major Tibetan-speaking areas of eastern Tibet traditionally associated with Kham, together with selected adjoining regions necessary for understanding long-distance interaction and regional integration. The study area in China includes the prefecture of Chamdo and parts of Nagchu and Nyingtri (Ch. Linzhi) in the Tibet Autonomous Region; the Tibetan Autonomous Prefectures of Yushu in Qinghai Province, Kardze in Sichuan Province, and Dechen in Yunnan Province; as well as Muli Tibetan Autonomous County and Yanyuan County in Sichuan, and Gongshan and Ninglang Counties in Yunnan. The resulting spatial coverage corresponds closely to the historical distribution of monastic institutions and the major transportation corridors linking Kham with Central Tibet, Amdo, Sichuan, and Yunnan.

Sources

The atlas is based on a geospatial database of 1,562 Buddhist monasteries, temples, hermitages, and Bonpo religious establishments documented for Kham and adjacent regions. Primary sources include county gazetteers (*xianzhi*), monastery surveys, pilgrimage guides, historical maps, and travel narratives, and published scholarship in Tibetan, Chinese, and Western languages. These materials were supplemented by high-resolution satellite imagery, online mapping resources, and field observations where available. Historical transportation routes were reconstructed from travel narratives, historical maps, and satellite imagery.

Geospatial Database Construction

Each monastery was assigned a unique point location and attributed with available information concerning sectarian affiliation, estimated monastic population ca. 1950, founding date, contemporary administrative location, and historical significance. Monastery locations were verified through comparison of multiple sources and manually checked using high-resolution satellite imagery. Estimated monastic populations were derived primarily from local gazetteers and monastery surveys and generally reflect conditions documented between the 1950s and 1980s. Where historical population figures were unavailable, approximate values were assigned based upon the documented size and importance of the institution, including evidence from historical descriptions, monastery surveys, and the scale of surviving monastic architecture visible in satellite imagery.

For analytical purposes, monasteries were grouped into four proportional size categories: Local Temples (1–19 monastics), Small Town Monasteries (20–99), Large Town Monasteries (100–499), and Monastic Cities (500 or more). These categories provide a heuristic measure of institutional hierarchy rather than rigid functional classifications.

Regional Systems Modeling

Regional systems were reconstructed through a combination of historical evidence, monastery hierarchy, least-cost spatial modeling, and kernel density analysis. To emphasize the larger institutional structures that organized regional interaction, local temples (1-19 monastics) and other small religious establishments were excluded from the construction of terrain-adjusted proximal polygons and regional system boundaries. Monastic population estimates were used to generate density surfaces representing the concentration of institutional

populations across Kham. Terrain-adjusted proximal polygons were then constructed to approximate historical interaction fields under premodern travel conditions. The resulting patterns were evaluated in relation to river basins, pastoral regions, agricultural zones, trade corridors, linguistic regions, and known historical connections among monasteries.

The regional systems identified in this atlas should be understood as analytical reconstructions rather than administrative units. They represent historically recurring patterns of interaction, aggregation, and regional organization centered upon monastic institutions. Together, these methods provide a spatial framework for examining the monastic urban systems, transportation corridors, and regional structures that shaped the historical geography of eastern Tibet.

Data Availability

All datasets used in the preparation of this atlas are available through the Tibetan Monastic Ritual Economy Model Database, Harvard Dataverse:
https://dataverse.harvard.edu/dataverse/tmrem

The principal dataset associated with this atlas is:

Ryavec, Karl E. 2026. *Kham Regional Systems Dataset (Version 1).* Harvard Dataverse. https://doi.org/10.7910/DVN/JH8IHP

The repository includes the following files:

Kham Monastery Database (Excel): A geospatial database of 1,562 Buddhist monasteries, temples, hermitages, and Bonpo religious establishments in Kham and adjacent regions. Attributes include monastery names, sectarian affiliations, administrative location, estimated historical monastic population (ca. 1950), founding dates, and geographic coordinates.

Monastery Point Shapefile: GIS point locations for all monasteries included in the database.

Regional Systems Polygon Shapefile: Terrain-adjusted monastery interaction polygons classified according to the regional systems model presented in this atlas.

Long-Distance Routes Shapefile: Reconstructed trade and travel routes, including the Northern Route, Southern Route, Northern Branch, Lhasa–Kokonor Route, Gya Lam, Guan Dao, Yunnan Route, and related corridors.

KML/KMZ Files: Google Earth versions of the monastery point and route datasets.

Atlas Plates: High-resolution map plates (JPEG) and the complete atlas in PDF format.

Accompanying documentation includes field definitions, source notes, and metadata describing the construction of the geospatial database and regional systems model. All GIS datasets are provided in ESRI Shapefile format with corresponding KML/KMZ files where applicable.

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Any errors of interpretation, classification, or mapping remain my own.

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Local Gazetteers

Various county gazetteers (*xianzhi*) published between the 1980s and 2010s were consulted for the counties comprising the study area. These sources provided information on monastery locations, historical monastic populations, founding dates, sectarian affiliations, local historical geography, and transportation networks.